

Palomar Habitable Zone Planet Finder (PARVI)

Completed Technology Project (2016 - 2019)



Project Introduction

Diffraction limited high resolution spectrograph for Doppler measurements of the host stars of extrasolar planets. This may enable the design of highly stable, high resolution spectrographs for astrophysics missions.

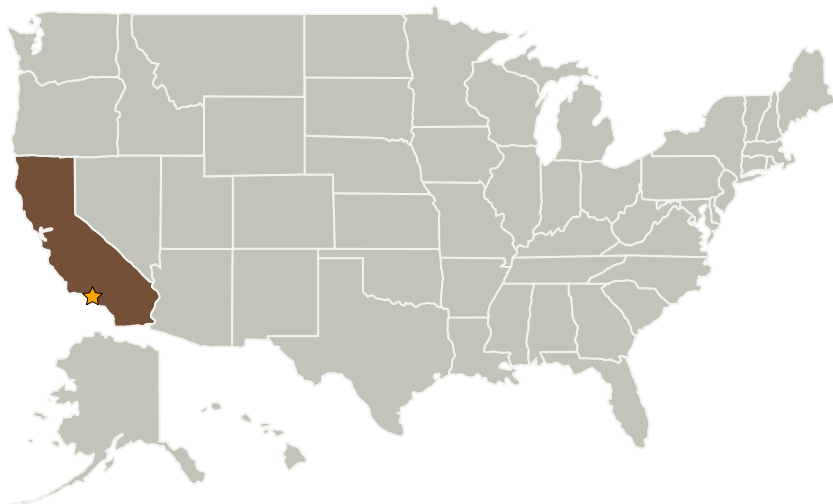
PARVI will couple to the Palm 3000 adaptive optics system at the Hale telescope at Palomar. It will conduct Doppler measurements of late type stars in search of low mass planetary companions. It may conduct follow-up activities for NASA TESS mission.

Anticipated Benefits

Follow up measurements of exoplanets found with the NASA TESS mission.

Develops technologies that are pertinent to future missions currently being studied such as HabEx and LUVOIR.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★ Jet Propulsion Laboratory (JPL)	Lead Organization	NASA Center	Pasadena, California

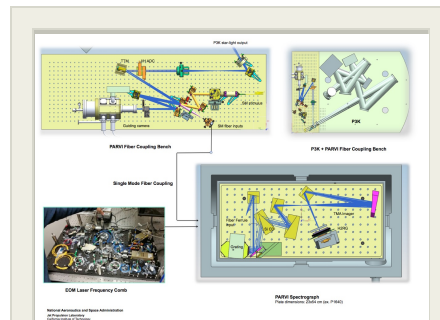


Photo shows pictures of a PARVI fiber coupling bench, a P3K + PARVI fiber coupling bench, a single mode fiber coupling, a EOM laser frequency comb, and a PARVI spectrograph.

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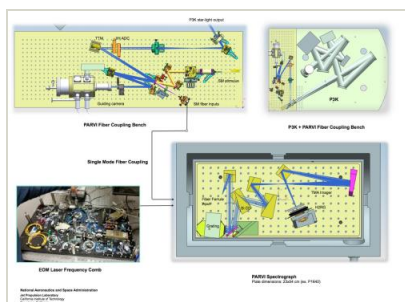
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Co-Funding Partners	Type	Location
American Museum of Natural History	Industry	

Primary U.S. Work Locations
California

Images



JPL_IRAD_Activities Project Image

Photo shows pictures of a PARVI fiber coupling bench, a P3K + PARVI fiber coupling bench, a single mode fiber coupling, a EOM laser frequency comb, and a PARVI spectrograph.

(<https://techport.nasa.gov/image/28005>)

Organizational Responsibility

Responsible Mission Directorate:

Mission Support Directorate (MSD)

Lead Center / Facility:

Jet Propulsion Laboratory (JPL)

Responsible Program:

Center Independent Research & Development: JPL IRAD

Project Management

Program Manager:

Fred Y Hadaegh

Project Manager:

Fred Y Hadaegh

Principal Investigator:

Gautam Vasisht

Co-Investigators:

Randall D Bartos
Charles A Beichman
David Hover
Stephanie D Leifer
Dimitri P Mawet
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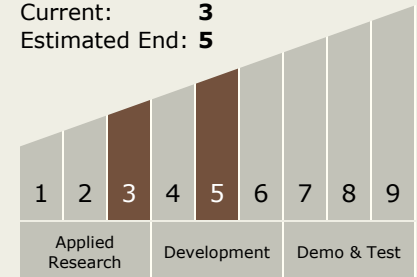
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Technology Maturity (TRL)

Start: **3**
Current: **3**
Estimated End: **5**



Technology Areas

Primary:

- TX08 Sensors and Instruments
 - └ TX08.1 Remote Sensing Instruments/Sensors
 - └ TX08.1.1 Detectors and Focal Planes

Target Destination

The Moon

Supported Mission

Type

Projected Mission (Pull)